

## **PCT**

#### **NOTIFICATION OF ELECTION**

(PCT Rule 61.2)

From the	INTERNAT	IONAL	BUREAU
----------	----------	-------	--------

To:

Commissioner **US Department of Commerce** United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 **ETATS-UNIS D'AMERIQUE** 

04 October 1999 (04.10.99)

in its capacity as elected Office

Date of mailing (day/month/year) 30 May 2001 (30.05.01) International application No. Applicant's or agent's file reference PCT/NO00/00326 **PS4300 IN** International filing date (day/month/year) Priority date (day/month/year)

**Applicant** 

04 October 2000 (04.10.00)

JENSSEN, Inge, Henning

The designated Office is hereby notified of its election made:
X in the demand filed with the International Preliminary Examining Authority on:
23 April 2001 (23.04.01)
in a notice effecting later election filed with the International Bureau on:
The election X was
was not
made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

Form PCT/IB/331 (July 1992)

Facsimile No.: (41-22) 740.14.35

The International Bureau of WIPO 34, chemin des Colombettes

1211 Geneva 20, Switzerland

**Nestor Santesso** 

Telephone No.: (41-22) 338.83.38

Authorized officer

# BEST AVAILABLE COPY

	From the INTERNATIONAL BU	REAU
PCT	То:	
NOTIFICATION OF THE RECORDING OF A CHANGE  (PCT Rule 92bis.1 and Administrative Instructions, Section 422)  Date of mailing (day/month/year) 12 December 2001 (12.12.01)	OSLO PATENTKONTOR AS P.O. Box 7007 M N-0306 Oslo NORVÈGE	
Applicant's or agent's file reference PS4300 IN	IMPORTANT NOTIF	ICATION
International application No. PCT/NO00/00326	O4 October 2000 (04.10.00)	ır)
The following indications appeared on record concerning:      X the applicant      X the inventor	the agent the common	representative
Name and Address	State of Nationality	State of Residence
JENSSEN, Inge, Henning Hansjordnes gate 8 N-9009 Tromsø Norway	NO Telephone No.	NO
Notway	Facsimile No.	
	Teleprinter No.	
2. The International Bureau hereby notifies the applicant that the		oncerning:
the person the name X the add		the residence
Name and Address JENSSEN, Inge, Henning	State of Nationality NO	State of Residence
Kveldrovegen 9 N-9007 Tromsø Norway	Telephone No.	:
	Facsimile No.	
	Teleprinter No.	
3. Further observations, if necessary:		
4. A copy of this notification has been sent to:		
X the receiving Office	the designated Offices of	oncerned
the International Searching Authority	X the elected Offices conce	erned
the International Preliminary Examining Authority	other:	
The International Bureau of WIPO 34, chemin des Colombettes	Authorized officer	
1211 Geneva 20, Switzerland	Anne KARKAO	JHI
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38	

Form PCT/IB/306 (March 1994)

004531589

## PATENT COOPERATION TREATY

# **PCT**

REC'D 25	JUL 2001
WIPO	POT

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PS4300 IN	FOR FURTHER ACT		- cation of Transmittal of International y Examination Report (Form PCT/IPEA/416)
International application No.	International filing date	(day/month/year)	Priority date (day/month/year)
PCT/NO00/00326	04.10.2000		04.10.1999
International Patent Classification (IPC) o	r national classification an	id IPC <sub>7</sub>	
A01K 63/02			
A1:A			
Applicant			
Jenssen, Inge Henning			
1. This international preliminary examples Authority and is transmitted to the control of the c	e applicant according to Andrews sheets, and by ANNEXES, i.e., sasis for this report and/or:	rticle 36.  , including this cover heets of the descripti sheets containing rec	sheet. on, claims and/or drawings which have tifications made before this Authority
These annexes consist of a total of	sheets.		
<ol><li>This report contains indications rel</li></ol>	ating to the following iten	ns:	
I Basis of the report			
II Priority			
٠ ــــا		veny, inventive step	and industrial applicability
IV Lack of unity of inver	ıtion		
V Reasoned statement u citations and explanat	V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		ntive step or industrial applicability;
VI Certain documents cit	ed		
VII Certain defects in the	international application		
VIII Certain observations of	on the international applica	ation	
			· I
,			
Date of submission of the demand	<del></del>	Date of completion -	Salin
Date of Submission of the demand		Date of completion o	i uus report
23.04.2001		21.06.2001	
Name and mailing address of the IPEA/SE		Authorized officer	
Patent- och registreringsverket Box 5055	Telex 17978		
S-102 42 STOCKHOLM	PATOREG-S	Göran Carls	
Facsimile No. 08-667 72 88	1000)	Telephone No. 08-	782 25 00



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/NO00/00326

I.	Bas	is of the report
1.	With	regard to the elements of the international application:*
	$\boxtimes$	the international application as originally filed
		the description:
		pages, as originally filed
		pages, filed with the demand
		pages, filed with the letter of
		the claims:
		pages, as originally filed
		pages, as amended (together with any statement) under article 19
		pages, filed with the demand
		pages, filed with the letter of
		the drawings:
		pages, as originally filed
		pages, filed with the demand
		pages, filed with the letter of
		the sequence listing part of the description:
		pages, as originally filed
		pages, filed with the demand
		pages , filed with the letter of
3.	the in These	regard to the language, all the elements marked above were available or furnished to this Authority in the language in which ternational application was filed, unless otherwise indicated under this item.  elements were available or furnished to this Authority in the following language
		The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.  The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.
4.		The amendments have resulted in the cancellation of:  the description, pages the claims, Nos. the drawings, sheet/fig
5.		This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2 (c)).**
•	Repla in this and 7	cement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to sreport as "originally filed" and are annexed to this report since they do not contain amendments (Rules 70.16 0.17).
**		eplacement sheet containing such amendments must be referred to under item I and annexed to this report.

# P

#### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/NO00/00326

V.	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability;
	citations and explanations supporting such statement

1.	Statement			
	Novelty (N)	Claims	1-5	YES
		Claims		NO
	Inventive step (IS)	Claims	1-5	YES
		Claims		NO NO
	Industrial applicability (IA)	Claims	1-5	YES
		Claims		NO

#### 2. Citations and explanations (Rule 70.7)

The claimed invention is not considered to be anticipated by the patent document cited. This document does not reveal the device for storing and transporting live fish described in the claims.

The invention according to claims 1-5 is therefore considered to be novel, to involve an inventive step and to be industrially applicable.

GB 730652 A (ERNST KARL ROSCHER)

#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau



# 

# (43) International Publication Date 12 April 2001 (12.04.2001)

#### **PCT**

# (10) International Publication Number WO 01/24623 A1

(51) International Patent Classification7:

\_\_\_\_

- (21) International Application Number: PCT/NO00/00326
- (22) International Filing Date: 4 October 2000 (04.10.2000)
- (25) Filing Language:

Norwegian

A01K 63/02

(26) Publication Language:

English

(30) Priority Data:

19994839

4 October 1999 (04.10.1999) NO

- (71) Applicant and
- (72) Inventor: JENSSEN, Inge, Henning [NO/NO]; Hansjordnes gate 8, N-9009 Tromsø (NO).
- (74) Agent: OSLO PATENTKONTOR AS; P.O. Box 7007 M, N-0306 Oslo (NO).

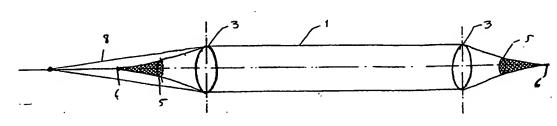
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

#### Published:

With international search report.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: EQUIPMENT FOR STORAGE AND TRANSPORT OF LIVING FISH



(57) Abstract: A fish bag (1, 1') comprising a netting with bag rings (3) and at the end a second netting (4) with purse lines (5, 6) and a towing line (9). One or more braces (9) and locking rings (8) to connect several fish bags (1) into larger units.



## INTERNATIONAL SEARCH REPORT

International application No.

PCT/NO 00/00326

A. CLASSIFICATION OF SUBJECT MATTER				
IPC7: A01K 63/02 According to International Patent Classification (IPC) or to both national classification and IPC				
B. FIELDS SEARCHED				
Minimum documentation searched (classification system followed by	y classification symbols)			
IPC7: A01K				
SE,DK,FI,NO classes as above	extent that such documents are included in	n the fields searched		
Electronic data base consulted during the international search (name	e of data base and, where practicable, scarci	i terms usea)		
C. DOCUMENTS CONSIDERED TO BE RELEVANT	<del></del>			
Category* Citation of document, with indication, where app	propriate, of the relevant passages	Relevant to claim No.		
A GB 730652 A (ERNST KARL ROSCHER) (25.05.55), page 2, column 5	), 25 May 1955 54 - line 80, figure 1	1,3,5		
<b></b>	•			
Further documents are listed in the continuation of Box	C. See patent family annex	ι.		
* Special categories of cited documents:  "A" document defining the general state of the art which is not considered	"T" later document published after the inte date and not in conflict with the applie	cation but cited to understand		
to be of particular relevance  "E" earlier application or patent but published on or after the international filing date	"X" document of particular relevance: the considered novel or cannot be considered.	claimed invention cannot be		
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other	step when the document is taken alone			
special reason (as specified)  "Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination				
"P" document published prior to the international filing date but later than the priority date claimed "&" document member of the same patent family				
Date of the actual completion of the international search	Date of mailing of the international s			
9 January 2001 1 7 -01- 2001				
9 January 2001 Name and mailing address of the ISA:	Authorized officer			
Swedish Patent Office				
Box 5055, S-102 42 STOCKHOLM  Facsimile No. + 46 8 666 02 86	Caroline Stolt/js	ļ		

Form PCT/ISA/210 (second sheet) (July 1998)

# INTERNATIONAL SEARCH REPORT Information on patent family members

Form PCT/ISA/210 (patent family annex) (July 1998)

04/12/00

International application No.
PCT/NO 00/00326

	Paten cited in	t document search report		Publication date	Patent family member(s)	Publication date	
_	GB	730652	A	25/05/55	NONE		
-							
						-	
						·	
				·			
		•					

6/prts

WO 01/24623

10

15

20

25

30

PCT/NO00/00326

#### Equipment for storage and transport of living fish.

The present invention concerns primarily a device for storage and transport of living fish, where the device is sausage-formed and the transport is preferably performed by this being towed after a boat.

The harvesting of the sea in the form of fishing is the largest and oldest business in this country through history. Today the fish export, disregarding the petrol area, is Norway's largest business money-wise, and the assurance of deliveries of products of high quality is of decisive importance for it to remain a large industry also in the future.

There are dumped large quantities of fish because the capacity of transporting it ashore is not present, and it is also not of the proper quality.

There are several factors interacting to determine the quality of the fish and the fish products when they arrive at the consumers somewhere in the world. When the fish die, a process starts in the fish meat giving it a poorer quality. The quality of the fish meat arriving at the consumer may be improved by waiting for the longest possible time before killing the fish so that the degradation process has been going on for as short a time as possible. The further treatment of the fish in the form of processing, refining, storage and transport should be made as short as possible under the most suitable conditions to maintain the quality.

The delaying of the time for the sacrificing of the fish and thus the starting of the decaying process, is a method that has been used in many connections also in former times through history. In seasons with e.g. a good supply of sails and perhaps a lack of capacity in the receiving country, the containment of fish in enclosures has been

common. This is done by the fish caught alive being imprisoned in a netting bag being anchored until it is fetched and is hoisted into a supply ship or the netting bag is towed to a receiving plant for fish. Fish that are imprisoned in such an enclosure will be standing very cramped under perhaps poor current conditions, and this stresses the fish, something that again reduces the quality and the fish die.

There are used well supply ships for transporting the fish
from the netting enclosures. The well supply ships are
equipped with tanks into which there is pumped seawater and
wherein fish are kept during their transport and reception.
Well supply ships is an expensive solution when considering
that in many instances a lot of fish die in the netting
enclosures before the ships collect them, so the economical
result of the fish may not be worthwhile in many cases.

In Norwegian patent no. 20.850 there is disclosed a storage unit for live fish comprising floats in both ends and between these a netting-cage for storing fish. Such a solution is suitable for storing fish, is more expensive than required, and does not represent any good solution with respect to transport. The transport of fish in any such device will have its limitation in how fast it may be transported for the fish to survive, and this is not any economically suitable speed for the transport per se.

20

25

Norwegian patent no. 81.500 discloses a container for collecting fish from a trawl and for further transport of the collected live fish to a receiving plant and for shorter storage. The collector is tied to a trawling bag and is not regarded as any suitable way to store and transport fish with respect to maintaining quality and avoid fish death.

In addition to the transporting of fish in a more or less hydrodynamic device, fish are transported in netting bags, a keeping netting. The towed keeping netting may not exceed a speed of 2-3 knots, something that is very time-consuming. Such solutions are disclosed in Norwegian patents nos. 24.069 and 52.761. The former discloses a seine bag being kept extended by a floating body, and a boat pulls the entire device. A speed exceeding 2-3 knots will be stressing for the fish and will create conditions increasing the mortality. In no. 52.761 there is disclosed a somewhat similar device, but here it is emphasised that there exist devices in addition to the seine netting which keep this inflated to avoid it being crushed during transport.

A container for transporting live fish, which also includes a penetrating current of water, appears from Norwegian patent no. 105.955. A penetrating current which may be reduced by one end partly comprising a solid grating or by one end being funnel-shaped. This to reduce the towing resistance and prevent the death of fish.

The purpose of the present invention is to provide a device

being suited for storage and transport of live fish for
transport velocities far exceeding (10-20 knots) what the
fish would endure outside the device, but without it
disparaging the environment. The invention has as one of
its goals a price so that is will be competitive in view of
what exist of transport devices for live fish.

This is achieved by a fish netting being secured in both ends with netting rings, and where at least one end is equipped with one netting and a funnel with a pursing mechanism.

Further details of the invention will be apparent from the disclosure infra of an exemplary embodiment thereof under reference to the figures.

Figure 1 depicts a basic form of the invention.

Figure 2 depicts a connection between several units into larger bags.

Figure 3 depicts connective devices for several units into larger bags.

Figure 4 depicts a detailed view of the outer enclosure according to the invention.

Figure 5 depicts the invention equipped with a brace and an anchoring of the bag.

Figure 6 depicts the fish bag during the transport with an additional external netting.

15

20

The invention comprises a fish bag 1 being made of strong webbing. If extra strength is wanted during e.g. transport, it is possible to sheath the entire fish bag 1 in a first netting 2. See figure 6. The fish bag 1 is tubular and is equipped with a bag ring 3 at both ends somewhat inside the end to keep the tube extended. To the ends of the fish bag 1 there is located a tubular second netting 4. At the transition between the fish bag 1 and the second netting 4, there is located a first purse line 5. A second purse line 6 is located in the second end of the second netting 4. Through these purse lines 5,6 the fish bag 1 may be pursed and be closed at the end so that fish do not escape, but it will be possible to determine and regulate the through-flow of water in the fish bag 1. This is depicted in the figures 1 and 4.

Several fish bags 1 may be connected into larger units as indicated in figure 2. The connection is performed by the bag rings 3 from fish bags 1 being placed adjacent to one another and being interconnected through a locking ring 7. See figure 3. In the connection there will thus be present such funnel-shaped units, one from each fish bag 1. When the fish bag 1,1' is to be towed behind a boat, extra towing lines 8 between the boat and the bag ring 3 may be applied.

WO 01/24623 PCT/NO00/00326

During transport of fish in the fish bag 1,1' the first purse line 5 is closed and the second purse line 6 is completely closed so that flow-through of water is made suitably rapid and comfortable for the fish. The fish bag 1 may be transported at great speed to its destination without the fish becoming injured or dead.

By employing the present invention fish may be towed ashore and may be stored live until the reception obtains the required capacity or until the market offers the required price. Furthermore, the fish may be towed alive as close as possible to the relevant market prior to it being slaughtered.

10

According to reports from the Ministry of Fishery a larger number of receptacles for fish along the coast will be closed within a short time. This means a longer transport for delivery of fish and a larger need for transport of the fish alive for maintaining its quality.

When maintaining the fish bag 1,1' in the sea for live storage of the fish, there may along the fish bag 1,1' be located braces 9 in the form of e.g. pipes. See figure 5. These may also function as a scaffolding for persons caring for the fish. The fish bag 1 may be equipped with current providers in the form of motorised propellers to obtain the required through-flow of water when the fish bag 1 is stationary, e.g. in the capacity of a fish farming plant.

#### Claims

- 1. Device for storing and transporting live fish, c h a r a c t e r i z e d i n a fish bag (1) being equipped at both ends with bag rings (3), and at said ends there being arranged a second netting (4) with purse lines (5,6)
  - 2. Device for storing and transporting live fish according to claim 1,
- characterized in that several fish bags (1) are coupled together through locking rings (7).
  - 3. Device for storing and transporting live fish according to any of the preceding claims, c h a r a c t e r i z e d i n that at one end of the fish bag (1,1') there are located towing lines (8).
- 4. Device for storing and transporting live fish according to claim 1,
  c h a r a c t e r i z e d i n that there is applied at least one brace (9) to the fish bag (1,1').
- 5. Device for transporting and storing live fish according to claim 1
  - characterized in that around the fish bag (1) there is located a first netting (2).

Application No. <u>Unassigned</u> Attorney's Docket No. <u>032292-030</u>

## **ABSTRACT**

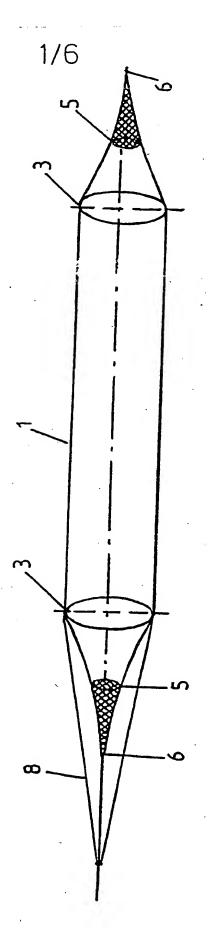
A fish bag (1,1') comprising a netting with bag rings (3) and at the end a second netting (4) with purse lines (5,6) and a towing line (9) and locking rings (8) to connect several fish bags (1) into larger units.

APPLN. FILING DATE: MARCH 28, 2002 TITLE: EQUIPMENT FOR STORAGE AND...

TITLE: EQUIPMENT FOR STORAGE A INVENTOR INGE HENNING JENSSEN WO 01/246 APPLICATION SERIAL NO: 032292-030

SHEET 1 of 6

PCT/NO00/00326

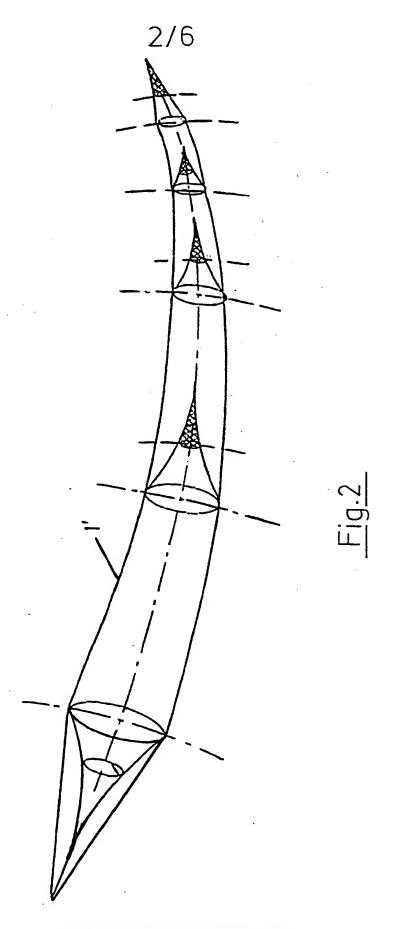


APPLN. FILING DATE: MARCH 28, 2002 TITLE: ECHIPMENT FOR STORAGE AND...

INVENTOR : INGE HENNING JENSSEN
WO 01/2462:
APPLICATION SERIAL NO: 032292-030

SHEET 2 of 6

PCT/NO00/00326



SUBSTITUTE SHEET (RULE 26)

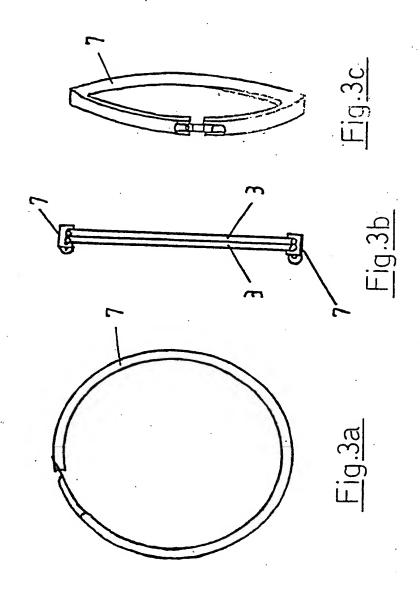
APPLN. FILING DATE: MARCH 28, 2002
TITLE: EQUIPMENT FOR STORAGE AND...
INVENTOR(S) NGE HENNING JENSSEN
WO 01/24 APPLICATION SERIAL NO: 032292-030 S

\*\*\*

SHEET 3 of 6

10/089225

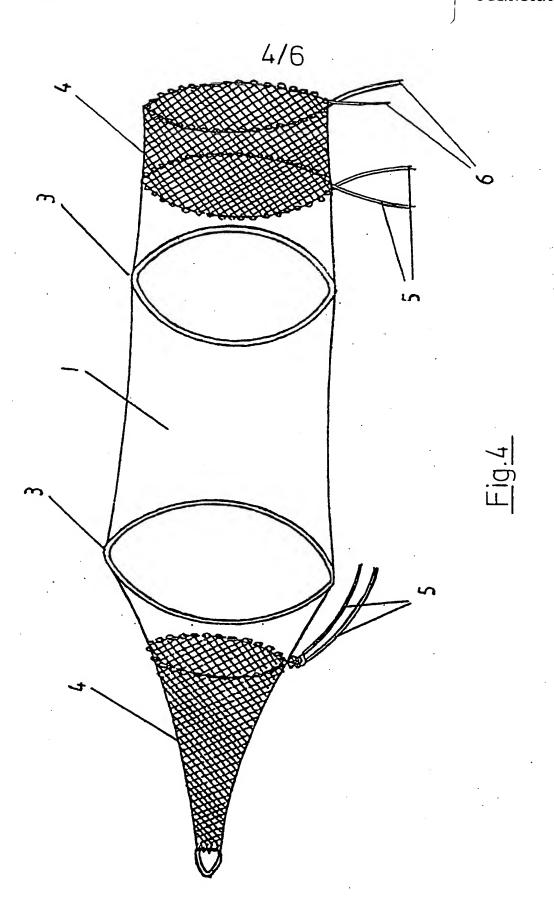
PCT/NO00/00326



SHEET 4 of 6

PCT/NO00/00326





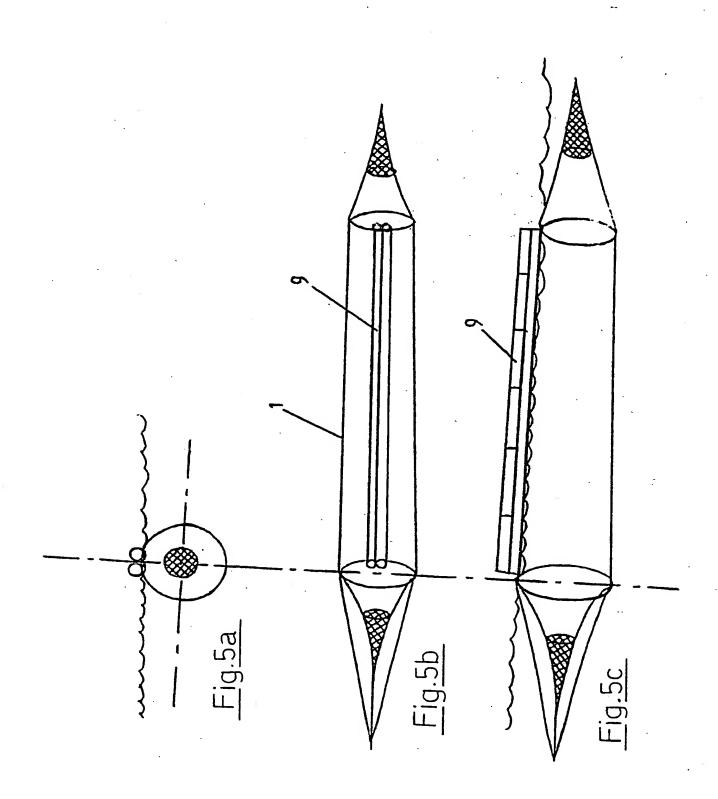
APPLN. FILING DATE: MARCH 28, 2002 TITLE: EXIPMENT FOR STORAGE AND...

INVENTOR: INGE HENNING JENSSEN
WO 01/246; APPLICATION SERIAL NO: 032292-030

SHEET 5 of 6

10/089225

PCT/NO00/00326

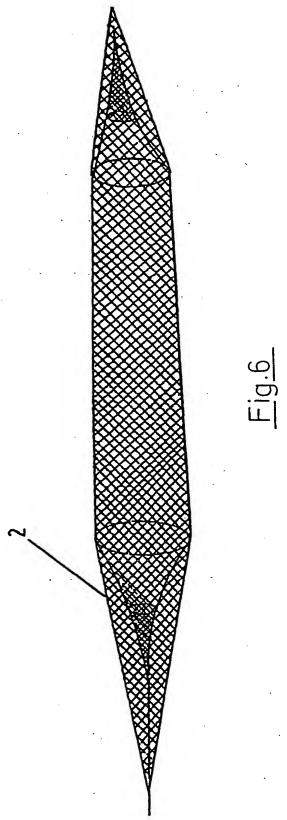


10/089225

APPLN. FILING DATE: MARCH 28, 2002
TITLE: QUIPMENT FOR STORAGE AND...
INVENTOR(S): INGE HENNING JENSSEN
WO 01/24623 APPLICATION SERIAL NO: 032292-030 S

SHEET 6 of 6

PCT/NO00/00326



# INTERNATIONAL SEARCH REPORT

Form PCT/ISA/210 (second sheet) (July 1998)

International application No.

		PC1/NO 00/0	00326			
A. CLAS	SIFICATION OF SUBJECT MATTER					
IPC7:	IPC7: A01K 63/02 According to International Patent Classification (IPC) or to both national classification and IPC					
B. FIELI	OS SEARCHED	•				
Minimum d	documentation searched (classification system followed to	by classification symbols)				
IPC7:	A01K					
Documenta	tion searched other than minimum documentation to the	ne extent that such documents are included i	n the fields searched			
SE,DK,	FI,NO classes as above					
Electronic d	lata base consulted during the international search (nam	ne of data base and, where practicable, search	terms used)			
,						
C. DOCL	JMENTS CONSIDERED TO BE RELEVANT	• • • • • • • • • • • • • • • • • • • •				
Category*	Citation of document, with indication, where ap	opropriate, of the relevant passages	Relevant to claim No.			
			Recvant to Claim 140.			
Α .	GB 730652 A (ERNST KARL ROSCHER (25.05.55), page 2, column	), 25 May 1955 54 - line 80, figure 1	1,3,5			
		<u>.</u>				
		·	·			
	* .					
,	·		•			
	•					
	·					
		ļ				
1	·					
	er documents are listed in the continuation of Bo	x C. X See patent family annex	•			
	categories of cited documents:  nt defining the general state of the art which is not considered	"T" later document published after the inter	mational filing date or priority			
to be of	particular relevance	date and not in conflict with the applic the principle or theory underlying the i	ucentioù apou par circa ro audetziaua			
mung cra		to continue of particular referance the c	laimed invention cannot be			
alea to	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other					
special r	special reason (as specified)  "Y" document of particular relevance: the claimed invention cannot be					
means	means combined with one or more other such documents, such combination					
"P" document the prior	nt published prior to the international filing date but later than rity date claimed	being obvious to a person skilled in the "&" document member of the same patent f				
Date of the	actual completion of the international search	Date of mailing of the international se				
- The memational search report						
9 Janua	rv 2001	17-	-01- 2001			
	mailing address of the ISA:	Authorized officer				
Swedish F	Patent Office	Tulionza Omen				
	S-102 42 STOCKHOLM	Caroline Stolt/js				
Facsimile N	No. +46 8 666 02 86	Tulonhone No. + 46 9 702 25 00				

# INTERNATIONAL SEARCH REPORT

Information on patent family members

Form PCT/ISA/210 (patent family annex) (July 1998)

International application No.

PCT/NO 00/00326

. 04/12/00 Patent document cited in search report Publication Patent family member(s) Publication date date GB 730652 25/05/55 NONE

# **PCT**

# **POWER OF ATTORNEY**

(for an international application filed under the Patent Cooperation Treaty), (PCT Rule 90.4)

The undersigned applicant(s) (Names should be indicated as they appear in the request):
Inge Henning Jenssen
Hansjordnessgt. 8
N-9009 TROMSØ
Norway
hereby appoints (appoint) the following person as:
Name and address (Family name followed by given name; for a legal entity, full official designation. The address must include postal code and name of country.)
Oslo Patentkontor AS
P.O.Box 7007 M
N-0306 OSLO
Norway
to represent the undersigned before all the competent International Authorities
the International Searching Authority only
the International Preliminary Examining Authority only
in connection with the international application identified below:
Title of the invention: Equipment for storage and transport of living fish
Applicant's or agent's file reference: 142977
International application number (if already available): PCT/NO00/00326
The Norwegian Patent Office
filed with the following Office as receiving Office as receiving Office and to make or receive payments on behalf of the undersigned.
Signature of the applicant(s) (where there are several applicants, each of them must sign; next to each signature, indicate the name of the person signing and
the capacity in which the person signs, if such capacity is not obvious from reading the request or this power):
Inge Henning Jenssen
Date: <u>Inge Henning Jensson</u>



**PCT** 

**REQUEST** 

The undersigned requests that the present international application be processed according to the Patent Cooperation Treaty.

- For receiving Office use only -

# PCT/NO 0 0 / 0 0 3 2 6 International Application No.

2000 -10- 0 4 International Filing Date



Name of receiving Office and PCP International Application"

	Applicant's or agent's file reference (if desired) (12 characters maximum)								
Box No. I TITLE OF INVENTION									
EQUIPMENT FOR STORAGE AND TRANSPORT OF LIVING FISH									
Box No. II APPLICANT									
Name and address: (Family name followed by given name; for a designation. The address must include postal code and name of cou address indicated in this Box is the applicant's State (that is, country of residence is indicated below.)	legal entity, full official ntry. The country of the ) of residence if no State	X This person is also inventor.							
,		Telephone No.							
JENSSEN, INGE HENNING		+47 77 68 44 12							
Hansjordnes gate 8, N-9009 Tromsø		Facsimile No.							
N-9009 Tromsø									
		Teleprinter No.							
State (that is, country) of nationality:	State (that is, country) of	f residence:							
Norway	Norway								
This person is applicant for the purposes of:  All designated all designated the United States		e United States America only the States indicated in the Supplemental Box							
Box No. III FURTHER APPLICANT(S) AND/OR (FURT	HER) INVENTOR(S)								
of residence is indicated below.)		applicant only  applicant and inventor  inventor only (If this check-box is marked, do not fill in below.)							
State (that is, country) of nationality:	State (that is, country) of nationality:  State (that is, country) of residence:								
This person is applicant for the purposes of:  all designated the United States all designated the United States	d States except tates of America of	e United States America only the States indicated in the Supplemental Box							
Further applicants and/or (further) inventors are indicated of	n a continuation sheet.								
Box No. IV AGENT OR COMMON REPRESENTATIVE	; OR ADDRESS FOR C	ORRESPONDENCE							
The person identified below is hereby/has been appointed to act o of the applicant(s) before the competent International Authorities	on behalf _ X ag	gent common representative							
Name and address: (Family name followed by given name; for a designation. The address must include postal co	legal entity, full official de and name of country.)	Telephone No. +47 77 65 66 67							
RUDI, ALF-PETTER									
Jurikon Teknologi AS		Facsimile No.							
Storgata 102, 9008 Tromsø	•	+ 47 77 66 25 56							
		Teleprinter No.							
Address for correspondence: Mark this check-box where r space above is used instead to indicate a special address to w	to agent or common repression correspondence shou	entative is/has been appointed and the							

Sheet No										
Bo.	x No.	V DESIGNATION OF STATES								
				46	P. D. shaddan and be marked):					
Th	e foll	owing designations are hereby made under Rule 4.9(a) (m	ark	ine apį	olicable check-boxes; at least one must be marked).					
Re	gions	l Patent								
X	AP ARIPO Patent: GH Ghana, GM Gambia, KE Kenya, LS Lesotho, MW Malawi, MZ Mozambique, SD Sudan, SL Sierra Leone, SZ Swaziland, TZ United Republic of Tanzania, UG Uganda, ZW Zimbabwe, and any other State which is a Contracting State of the Harare Protocol and of the PCT									
X	EA	Lurasian Patent: AM Armenia, AZ Azerbaijan, BY Belarus, KG Kyrgyzstan, KZ Kazakhstan, MD Republic of Moldova, RU Russian Federation, TJ Tajikistan, TM Turkmenistan, and any other State which is a Contracting State of the Eurasian Patent Convention and of the PCT								
՛Ծ	EP	European Patent: AT Austria, BE Belgium, CH and LI Switzerland and Liechtenstein, CY Cyprus, DE Germany, DK Denmark, ES Spain, FI Finland, FR France, GB United Kingdom, GR Greece, IE Ireland, IT Italy, LU Luxembourg, MC Monaco, NL Netherlands, PT Portugal, SE Sweden, and any other State which is a Contracting State of the European Patent								
図	OA	Convention and of the PCT  OAPI Patent: BF Burkina Faso, BJ Benin, CF Central African Republic, CG Congo, CI Côte d'Ivoire, CM Cameroon, GA Gabon, GN Guinea, GW Guinea-Bissau, ML Mali, MR Mauritania, NE Niger, SN Senegal, TD Chad, TG Togo, and any other State which is a member State of OAPI and a Contracting State of the PCT (if other kind of protection or treatment desired,								
specify on dotted line)										
National Patent (if other kind of protection or treatment desired, specify on dotted line):										
Z	ΑE	United Arab Emirates	Ø	LC	Saint Lucia					
		Antigua and Barbuda	$\Box$	LK	Sri Lanka					
図	ΑL	Albania	如	LR	Liberia					
辺	AM	Armenia	应	LS	Lesotho					
IXI		Austria	=	LT	Lithuania					
<u>区</u>		Australia	=							
=				LU	Luxembourg					
內		Azerbaijan			Latvia					
لما	BA	Bosnia and Herzegovina	(X	MA	Morocco					
$\boxtimes$	$\mathbf{B}\mathbf{B}$	Barbados		MD	Republic of Moldova					
Ø	BG	Bulgaria		MG	Madagascar					
X		Brazil	=		The former Yugoslav Republic of Macedonia					
_		Belarus			Mongolia					
					Malawi					
M		Belize	$\equiv$							
团	CA	Canada	À	MX	Mexico					
<u> </u>	CH	and LI Switzerland and Liechtenstein	ĮΧΙ	ΜZ	Mozambique					
[2]	CN	China	$\square$	NO	Norway					
図	CR	Costa Rica	$\boxtimes$	NZ	New Zealand					
$\square$	CU	Cuba	囟	PL	Poland					
囟	$\mathbf{CZ}$	Czech Republic	Ì	PT	Portugal					
Ŕ		Germany		RO	Romania					
		Denmark	ᆮ	RU	Russian Federation					
			$\tau$							
ᆮ		Dominica	$\equiv$	SD	Sudan					
X		Algeria	لكا	SE	Sweden					
		Estonia	囟	SG	Singapore					
囟	ES	Spain	Ø	SI	Slovenia					
図	FI	Finland	ĺΣ	SK	Slovakia					
		United Kingdom		SL	Sierra Leone					
		Grenada	•	TJ	Tajikistan					
		Georgia			Turkmenistan					
			_	TM						
1 -		Ghana	=	TR	Turkey					
1		Gambia		TT	Trinidad and Tobago					
M	HR	Croatia	Z	TZ	United Republic of Tanzania					
囚	HU	Hungary	囟	UA	Ukraine					
	ID	Indonesia	Ø	UG	Uganda					
	IL	Israel	ĺΧΙ	US	United States of America					
	IN	India	-	UZ	Uzbekistan					
				VN	Viet Nam					
	IS	Iceland	7		•					
	JP	Japan	_	YU	Yugoslavia					
		Kenya		ZA	South Africa					
	KG	Kyrgyzstan	Ø	ZW	Zimbabwe					
N	KP	Democratic People's Republic of Korea Check-box reserved for designating States which have become								
_		Republic of Korea party to the PCT after issuance of this sheet:								
		Kazakhstan								
_	ILL.	Razanistaii			de aleman de annula de la male a un de Dela 4 O(h) ell athan					

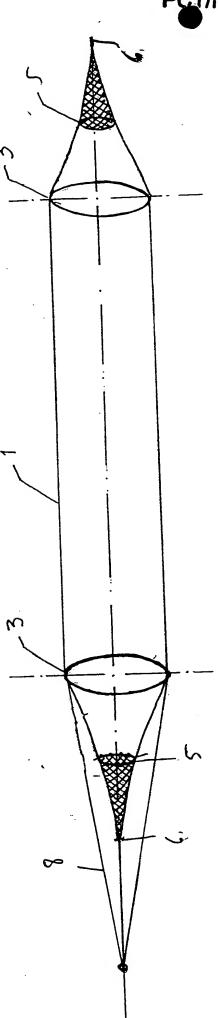
Precautionary Designation Statement: In addition to the designations made above, the applicant also makes under Rule 4.9(b) all other designations which would be permitted under the PCT except any designation(s) indicated in the Supplemental Box as being excluded from the scope of this statement. The applicant declares that those additional designations are subject to confirmation and that any designation which is not confirmed before the expiration of 15 months from the priority date is to be regarded as withdrawn by the applicant at the expiration of that time limit. (Confirmation (including fees) must reach the receiving Office within the 15-month limit.)

3/3

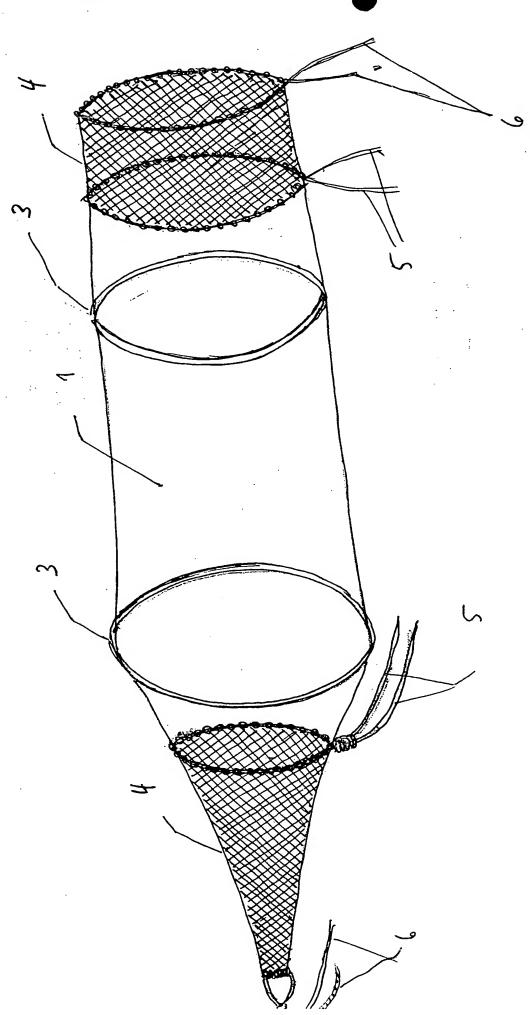
Sheet No. ...

	<del></del>								
Box No. VI PRIORITY C		Further price	rity claims are indicated in						
Filing date	Number		Where earlier application	n is:					
of earlier application (day/month/year)	of earlier application	national application: country	regional application:* i regional Office	nternational application: receiving Office					
item (1) 04/10/99	19994839	Norway							
item (2)									
item (3)									
The receiving Office is requested to prepare and transmit to the International Bureau a certified copy of the earlier application(s) (only if the earlier application was filed with the Office which for the purposes of the present international application is the receiving Office) identified above as item(s):  19994839									
* Where the earlier application is Convention for the Protection of In	an ARIPO application, it is ndustrial Property for which	s mandatory to indicate in the Si h that earlier application was file	applemental Box at least one ad (Rule 4.10(b)(ii)). See Sup	country party to the Paris plemental Box.					
Box No. VII INTERNATIO	ONAL SEARCHING A	UTHORITY							
Choice of International Searching Authority (ISA) (if two or more International Searching Authorities are competent to carry out the international search, indicate the Authority chosen; the two-letter code may be used):  Date (day/month/year)  Request to use results of earlier search; reference to that search (if an earlier search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):  Search has been carried out by or requested from the International Searching Authority):									
ISA/ SE									
Box No. VIII CHECK LIST	T; LANGUAGE OF F	LING							
This international application of the following number of sheet	ts.	onal application is accompa	nied by the item(s) marked	i below:					
request : 3	3   -	lculation sheet							
description (excluding		ite signed power of attorney							
sequence listing part) : 4	·   💆 ···	of general power of attorney;	•						
claims : ]	1 4. statem	ent explaining lack of signate	ure						
abstract : ]	L_ 5. 🔲 priorit	y document(s) identified in E	Box No. VI as item(s):						
	Y S 6. 🗆 transla	ition of international applicat	ion into (language):						
sequence listing part of description : -	7. separa	te indications concerning dep	posited microorganism or	other biological material					
or description	8. 🔲 nucleo	otide and/or amino acid seque	ence listing in computer re-	adable form					
Total number of sheets : 12	3]  4   9. □ other	(specify):							
Figure of the drawings which should accompany the abstract		Language of filing of the international application:	Norwegian						
Box No. IX SIGNATURE	OF APPLICANT OR	AGENT							
Next to each signature, indicate the na	ame of the person signing and	the capacity in which the person sig	ns (if such capacity is not obviou	is from reading the request).					
Alf-Petter Rudi									
agent									
·									
Date of actual receipt of the international application:		or receiving Office use only -	0.00)	2. Drawings:					
3. Corrected date of actual receipt due to later but timely received papers or drawings completing the purported international application:  2000 -10- 0 4 (04.10.00)									
4. Date of timely receipt of the required corrections under PCT Article 11(2):									
5. International Searching Aut (if two or more are compete			tal of search copy delayed th fee is paid.						
Date of receipt of the record country the International Bureau:		nternation 'Bureau use only		1 5. 11. 00 )					

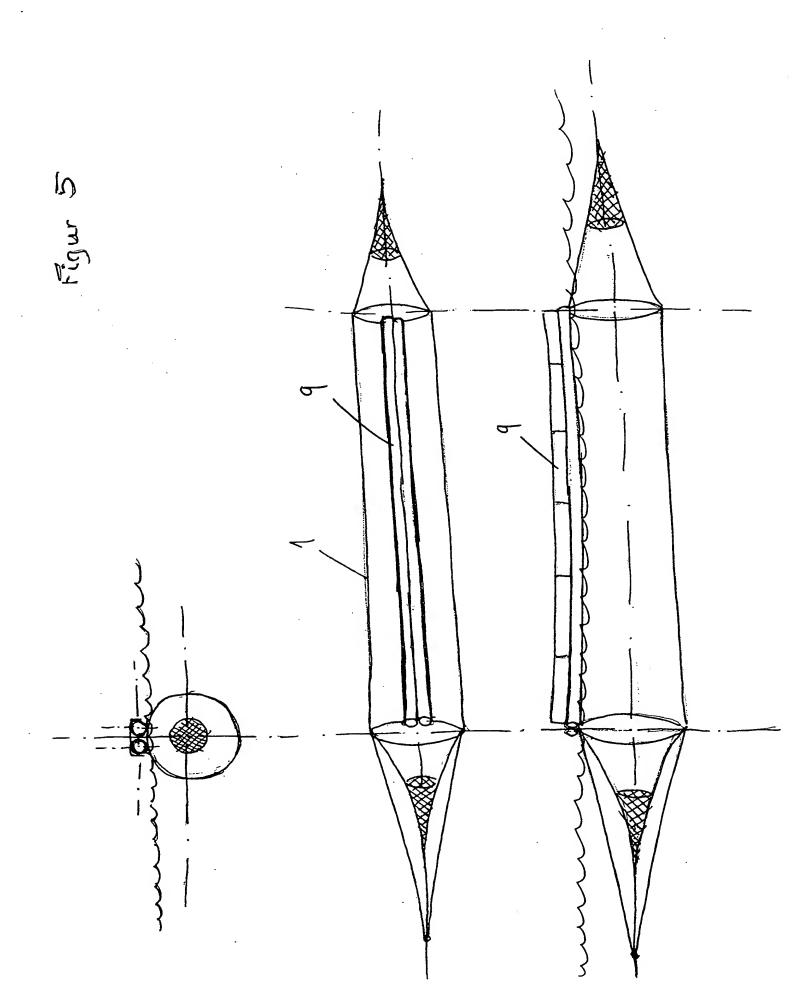
RO/NO



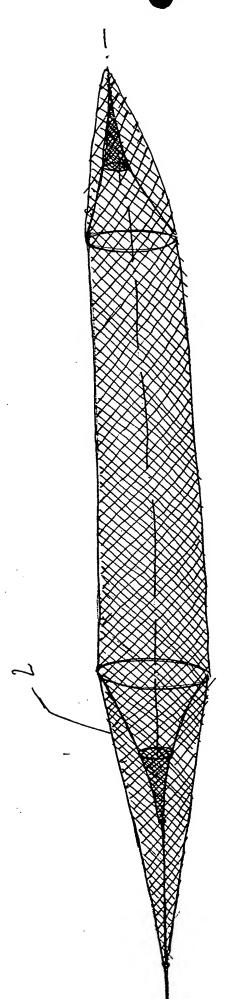
بر م



Figur 4



Figur 6



## Anordning for oppbevaring og transport av levende fisk.

l

Oppfinnelsen angår primært en innretning for oppbevaring og transport av levende fisk hvor innretningen er pølseformet og transporten skjer fortrinnsvis ved at denne slepes etter båt.

Høsting av havet i form av fiske er et den største og eldste næring her i landet gjennom historien I dag er fiskeeksporten dersom man ser bort fra petroleumsområdet vår største næring i kroner og det å kunne utføre sikre leveranser av produkter med høy kvalitet, er av avgjørende betydning for at det skal forbli en stor næring også i fremtiden.

Det dumpes store mengder fisk fordi man ikke har kapasitet til å føre den på land eller den ikke er av helt riktig kvalitet.

Det er flere faktorer som er medvirkende til å bestemme kvaliteten på fisken og fiskeprodukter når de når frem til forbrukerne en eller annen plass i verden. Idet fisken dør starter en prosess i fiskekjøttet som forringer det. Kvaliteten på fiskekjøttet når det når frem til forbrukes kan økes ved at man venter lengst mulig med å ta livet av fisken slik at forringelsesprosessen er kommet kortest mulig. Den videre behandlingen av fisken i form av bearbeiding, foredling, lagring og transport, bør gjøres kortest mulig og under best mulige forhold for å opprettholde kvaliteten.

Den å forsinke tidspunktet for slakting og start av forringelsesprosessen, er en metode som har vært benytte i flere sammenhenger også noe tilbake i historien. I sesonger med for eksempel god tilgang på seil og kanskje mangel på kapasitet på mottakene i land, er det å sette fiske i steng vanlig. Det gjøres ved at fisk som er fanges levende står stengt inne i en notpose som er forankret, til den hentes og håves inn i brønnbåt eller notposen tauet til et fiskemottak. Fisk som lukkes slik i steng, blir stående trangt kanskje det er dårlige strømforhold og det stresser fisken som igjen reduserer kvaliteten og fisk dør.

Det benyttes brønnbåter for å hente fisken fra steng. Brønnbåter er utstyrt med tanker som pumpes inn sjøvann i og hvor fiske oppbevares under transport til fiskemottak. Brønnbåter er en kostbar løsning og når man i tillegg det mange tilfeller er mye fisk som dør i stengene før brønnbåter henter dem, så blir kanskje det økonomiske resultatet av fisken ikke formålstjenlig i mange tilfeller.

I norsk patent nr. 20.850 er det beskrevet en oppbevaringsenhet for levende fisk bestående av flottører i begge ender og mellom disse nettlignende bur for

oppbevaring av fisk. En slik løsning er egnet for oppbevaring av fisk, er noe mer kostbar enn nødvendig, og er ikke noen god løsning med tanke på transport. Transport av fisk i slike innretninger vil ha sin begrensning hvor hurtig den kan transporteres for at fiske skal overleve, hvilket ikke er noen økonomisk god hastighet for transporten i seg selv.

Norsk patent nr. 81.500 beskriver beholder for oppsamling av fisk fra en trål og for videre transport av oppsamlet levende fisk til mottak og kortere oppbevaring. Oppsamleren er knytte til en trålpose og ansees ikke å være noen god måte å oppbevare og frakte fisk på med tanke på å opprettholde kvalitet og unngå fiskedød.

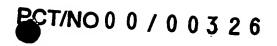
I tillegg til transport av fisk mer eller mindre lukkede hydrodynamiske innretning, transporteres fisk i slep i nettposer, merder. Slepet kan ikke komme holde større fart en 2-3 knop hvilket er svært tidkrevende. Slike løsninger er beskrevet i norsk patent nr. 24.069 og 52.761. Den førstnevnte beskriver en notpose som holdes utspilt av et flytelegeme og hele innretning trekkes av en båt. En større fart enn 2-3 knop vil være stressende for fisken og skape forhold som øker dødelighet. I nr. 52.761 beskrives en noen tilsvarende innretning, men her er det lagt vekt på at det finnes innretninger i tillegg til notposen som holder denne oppspilt for å unngå at den klemmes sammen under transport.

En beholder for transport av levende fisk hvor det også er gjennomstrømning av vann fremgår av norsk patent nr. 105.955. En gjennomstrømning som kan reduseres ved at ende delvis består av fast gitter eller at ende er trakteformet. Dette for å redusere bokseringsmotstanden og hinder død av fisk.

Hensikten med foreliggende oppfinnelse er å fremskaffe en innretning som egner seg til oppbevaring og transport av levende fisk for transporthastigheter langt over (10-12 knop) det fisken kan tåle, men uten at det forringer den miljø. Oppfinnelsen tar mål av seg til å ha en slik pris at det er konkurransemessig det som finnes av transportinnretninger for levende fisk.

Dette oppnås ved att en fiskepose anordnet i begge ender med poseringer og hvor det minste i en ende er anordnet et 1. nett og en trakt med snørpemekanisme.

Ytterligere detaljer ved oppfinnelsen vil fremgå av den etterfølgende gjennomgangen av et eksempel på utførelse av denne under henvisning til tegningene.



Figur 1 viser grunnforming av oppfinnelsen.

Figur 2 viser sammenkobling av flere enheter til større poser.

Figur 3 viser koblingsenheter for flere enheter sammen til større poser.

Figur 4 viser detaljutforming av oppfinnelsen yttervegg.

Figur 5 viser oppfinnelsen utstyrt med avstivning og forankring av

posen.

Figur 6 viser fiskeposen under transport med et ekstra ytre nett.

Oppfinnelsen består av en fiskepose 1 som er tilvirket i en sterk duk.

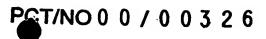
Dersom man ønsker en ekstra styrke under for eksempel transport, kan man innhylle hele fiskeposen 1 i et 1. nett 2. Se figur 6. Fiskeposen 1 er rørformet og anordnet med en posering 3 i begge ender noe innenfor enden for å holde rørformen utspilt. Det er anordnet til endene av fiskeposen 1 et rørformet 2. nett 4. I overgangen mellom fiskeposen 1 og det 2. nettet 4, finnes en 1. snurpeline 5. En 2. snurpeline 6 finnes i den andre enden av det 2. nettet 4. Ved hjelp av disse snurpelinene 5,6, kan fiskeposen 1 snøres sammen og bli lukket i enden slik at fisk ikke kommer ut, men man vil kunne bestemme og styre gjennomstrømningen av vann i fiskeposen 1. Dette fremgår av figurene 1 og 4.

Flere fiskeposer 1 kan kobles sammen til større enheter som vist i figur 2. Sammenkoblingen skjer ved at poseringer 3 fra to fiskeposer 1 legges inntil hverandre, og føyes sammen av en låsering 7. Se figur 3. I sammenkoblingen vil det således forefinnes to slike traktformede enheter, en fra hver fiskepose 1. Når fiskeposen 1, 1' skal slepes etter båt, så kan det kobles ekstra slepeliner 8 mellom båt og poseringen 3.

Under transport av fisk i fiskeposen 1, 1' er den 1. snurpelinen 5 delvis lukket og den 2. snurpelinen 6 helt lukket slik at gjennomstrømning av vann blir passe stor og behagelig for fisken.. Fiskeposen 1 kan transporteres med stor hastighet til bestemmelsesstedet uten at fisken skades eller dør.

Ved bruk av foreliggende oppfinnelse kan fisk slepes til land, lagre den levende til mottaket har kapasitet eller markedet gir bedre pris. Videre kan fisken slepes nærmest mulig markedet i levende tilstand før den slaktes.

Ifølge meldinger fra Fiskeridepartementet vil et større antall fiskemottak langs kysten bli nedlagt innen kort tid. Det betyr lengere transport for levering av fisk og større behov for transport av fisken levende for opprettholdelse av kvaliteten.



Ved oppbevaring av fiskeposen 1, 1' i sjø for levende lagring av fisken, kan det til fiskeposen 1,1' anordnes langsgående avstivere 9 i form av for eksempel rør. Se figur 5. Disse kan også fungere som vandring for personer som ser til passer fisken. Fiskeposen (1) kan påsettes strømsettere i form av motordrevne propeller for å opprette ønsket vanngjennomstrøming når fiskeposen (1) er i ro, f.eks. ved oppbevaring av fisk.

#### **PATENTKRAV**

- 1. Anordning for oppbevaring og transport av levende fisk, **karakterisert ved** en fiskepose (1) anordnet i begge ender med poseringer (3) og hvor det i endene er anordnet et 2. nett (4) og med snurpeliner (5,6).
- 2. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, karakterisert ved at flere fiskeposer (1) er anordnet sammen ved hjelp av låseringer (7).
- 3. Anordning for oppbevaring og transport av levende fisk ifølge et av de foregående kravene, **karakterisert ved** at det i ene enden av fiskeposen (1,1') er anordnet slepeliner (8).
- 4. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, karakterisert ved at det er anordnet minst en avstivere (9) til fiskeposen (1,1').
- 5. Anordning for oppbevaring og transport av levende fisk ifølge krav 1, karakterisert ved at det rundt fiskeposen (1) er anordnet et 1. nett (2).

## **SAMMENDRAG**

En fiskepose (1,1') bestående av duk med poseringer (3) og i enden et 2. nett (4) med snurpeliner (5,6) og en slepeline (9). En eller flere avstivere (9) og låseringer (8) for å koble sammen flere fiskeposer (1) til større enheter.

Figur 1.